

(Translation)

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Title: Method and Apparatus for Filling Powder

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As shown in Fig. 2, a cylinder 1 has one end thereof opened. The cylinder 1 includes a piston 2 capable of sliding, and an air escaping channel 4. The cylinder 1 is pressingly inserted and lowered in a powder storing part 33 with a bottom, while a pressure inside the cylinder 1 is reduced to a negative one by discharging air through the air escaping channel 4 so as to suck powder into the cylinder 1. Then, the powder in the cylinder 1 becomes solidified by a pressing force caused by the pressing insertion of the cylinder 1 into the powder storing part 33 and the negative pressure. Under this state, the cylinder 1 is rotated to perform a so-called "cutting out operation". Thereafter, the cylinder 1 is taken out from the powder storing part 33, and the piston 2 is slid to push out the solidified powder into a container 14 outside the cylinder 1. At this time, the cutting out operation can be more assuredly carried out by pressingly inserting and lowering the cylinder 1 such that a lower end opening of the cylinder 1 is brought into contact with a bottom of the powder storing part 33, and the cylinder 1 under this condition is rotated.

An apparatus for conducting the powder filling method may include a cylinder 1 with its lower end being opened, a piston 2 made of porous material that is slidably disposed in the cylinder 1. An upper end of the cylinder 1 is connected to a vacuum pump

32. The vacuum pump 32 sucks air passing from a lower end part of the cylinder 1 through the piston 2 and an air escaping channel 4.